

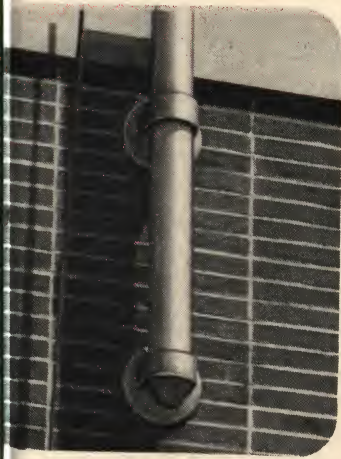
aabec pole division of
**the
morgan--
francis
company, inc.**

flagpoles

Long experience in the fabrication of metal flagpoles, expert craftsmen and shop facilities, equipped with the most up to date machinery enable us to meet exacting requirements set forth in any specification.

The Morgan-Francis Co. staff, always ready to assist architects and contractors for information on design, limited budgets, difficult installations and shipping. Our products are designed for utmost safety under all weather conditions.

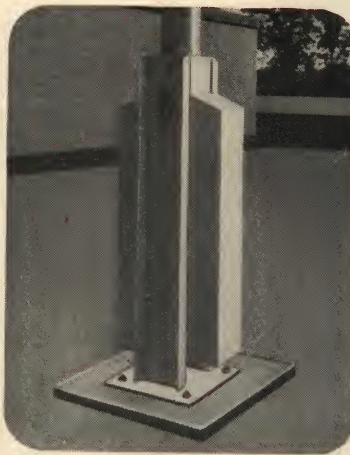
Years of dependable services on designs provide beauty and grace to properly support and display our nation's most significant emblem, epitomizing democracy and freedom for mankind the world over.



vertical



outrigger



tilting

a *aluminum & steel tapered*

b *steel sectional & tilting*

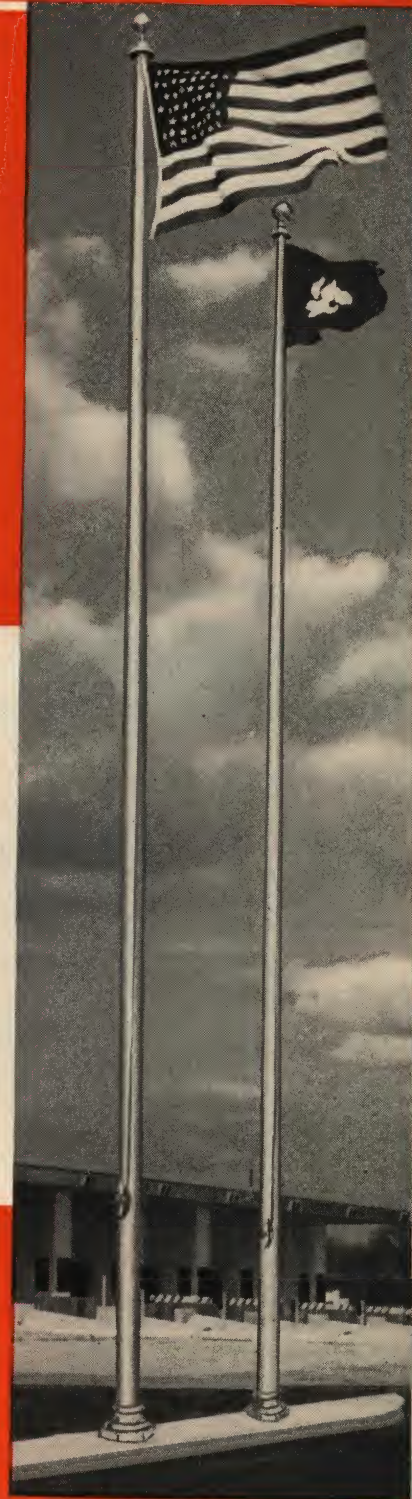
c *wall mounted*

d *foundations, fittings, bases*

e *line dryer poles, nautical,
roof mounted*

back cover

- **engineering service**
- **erection**
- **maintenance**
- **estimating**
- **antenna pole**



a typical Twin pole installation for thruways

aluminum tapered

description

Machine tapered to form an uninterrupted exterior surface without visible joints or offsets. Made from seamless aluminum tubing, 3/16" minimum wall, alloy 6063-T-6. Uniform conical taper, 1 inch in every 5'6" throughout tapered portion. Satin brushed finish heavily waxed.

Field Joints: When these poles are shipped in more than one section, at extra cost, we supply self-aligning, machine fitted, tapered field joints that any erector can push together without field welding (per accompanying instructions on Page 3—see cut). Ship by truck in one piece up to 40', in many states, by railroad up to 60'.

dimensions

exposed height, feet	setting depth, feet	total length, feet	tapered portion	cylindrical butt	diameter in inches			wall thickness, inches	pole weight, bare
					butt	top	ball		
20	3	23	9'8"	13'4"	5	3 1/4	5	3/16	80
25	3	28	11'0"	17'0"	5 1/2	3 1/2	6	3/16	110
30	3 1/2	33 1/2	13'9"	19'9"	6	3 1/2	6	3/16	140
35	3 1/2	38 1/2	19'3"	19'3"	7	3 1/2	6	3/16	185
40	4	44	24'9"	19'3"	8	3 1/2	8	3/16	250
50	5	55	33'0"	22'0"	10	4	10	3/16	385
59	6	65	38'6"	26'6"	12	5	12	3/16 & 1/4 upper lower	625
65	6 1/2	71 1/2	38'6"	33'0"	12	5	12	1/4	690

Importance of proper ground setting. The proper foundation and setting of ground set poles is important to the life of the pole. For specific cases, write us for large scale details.

steel cone tapered

description

This uniform pole has a smooth exterior surface with no visible joints or offsets, and had a minimum wall thickness of 1/4 inch. Conical taper of 1" in every 7.14 feet of tapered length. The cylindrical butt portion is of seamless steel pipe or tubing. This graceful flagpole combines economy with high strength.

When shipped in sections, each section has a self-aligning field joint that can be pushed together easily. Then a small weld around pole — ground smooth — completes the union.

Ship by truck in one piece up to 40', in many states, by railroad up to 60'.

dimensions

exposed height, feet	setting depth, feet	total length, feet	¼" wall, tapered portion, feet	cylindrical butt, feet	butt cylindrical wall thickness, inches	diameter in inches			pole weight, bare
						butt	top	ball	
ECONOMY TYPE									
25	3½	28½	12½	16	.247	5	3¼	5	395
30	3½	33½	12½	21	.247	5	3¼	6	460
35	4	39	16½	22½	.250	5⅝	3¼	6	610
40	4	44	19½	24½	.250	6	3¼	6	730
50	5	55	24	31	.280	6⅝	3¼	7	1040
59	6	65	31¼	33¾	.301	7⅞	3¼	8	1435
70	7	77	38½	38½	.322	8⅞	3¼	8	2185
75	7½	82½	45¼	37¼	.342	9⅞	3¼	10	2460
80	8	88	53½	34½	.365	10¾	3¼	10	2850
90	9	99	58¾	40¼	.375	11¾	3½	12	3550
100	10	110	66	44	.375	12¾	3½	12	4300
STANDARD TYPE									
20	3	23	12½	10½	.247	5	3¼	5	325
25	3½	28½	16½	12	.258	5⅝	3¼	6	425
30	3½	33½	19½	14	.250	6	3¼	6	535
35	4	39	24	15	.280	6⅝	3¼	6	690
40	4	44	31¼	12¾	.301	7⅞	3¼	8	870
50	5	55	38½	16½	.322	8⅞	3¼	8	1235
59	6	65	53½	11½	.365	10¾	3¼	10	1550
70	7	77	60½	16½	.375	11¾	3¼	10	2400
75	7½	82½	62½	20	.375	12¾	4	12	2850
80	8	88	71½	16½	.500	14	4	12	3475
90	9	99	78¼	24¼	.500	15	4	14	4225
100	10	110	85¾		.500	16	4	14	5000
SUPERSTANDARD TYPE									
30	3½	33½	24	9½	.280	6⅝	3¼	6	590
35	4	39	29½	9½	.301	7⅞	3½	8	775
40	4	44	33	11	.322	8⅞	4	8	1025
45	4½	49½	36½	13	.342	9⅞	4½	8	1300
50	5	55	41	14	.365	10¾	5	10	1625
59	6	65	44½	20½	.375	11¾	5½	10	2200
65	6½	71½	51¾	19¾	.375	12¾	5½	12	2665
70	7	77	60¾	16¾	.500	14	5½	12	3300
75	7½	82½	67¾	14¾	.500	15	6	14	3625
80	8	88	71½	16½	.500	16	6	14	4150
90	9	99	82	17	.500	18	6½	14	5100
100	10	110	96	14	.500	20	6½	14	6600

a

- aluminum tapered
- steel cone tapered
- ground set

specifications

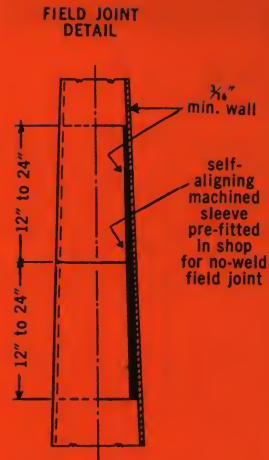
Furnish and erect, where shown on drawings or in specifications, a seamless aluminum tapered flagpole, with all necessary fittings listed below, as manufactured by The Morgan-Francis Co., Inc., Route #1 at Expressway, Stratford, Conn. Flagpole to be ground set, feet exposed height, feet total length. The tapered portion shall be feet inches, the butt diameter inches and the top diameter inches.

Standard Fittings: Copy specification de-

tails on pages 8 & 9 for Aluminum Ball, Aluminum Truck, Halyards, Flagsnaps, Aluminum Cleats.

For foundation assembly specifications and bases, see pages 8 & 9

PAINTING. The unexposed portion of the flagpole and all parts below ground, including the foundation sleeve assembly, shall receive a heavy shop coat of black asphaltum paint on both inside and outside surfaces. (Painting of aluminum exterior surfaces is not recommended.)



specifications

Where shown on drawings or in specifications, furnish and erect an..... (Economy or Standard) type seamless steel cone tapered flagpole, with all necessary fittings listed below, as manufactured by The Morgan-Francis Co. Inc., Route #1 at Expressway, Stratford, Conn. Flagpole to be ground set, feet exposed height, feet total length. The tapered portion shall be feet inches, the butt diameter inches, and the top diameter inches.

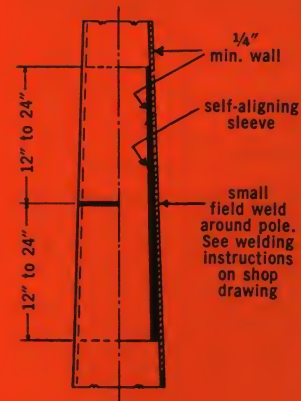
Standard Fittings: Copy specifications from

pages 8 & 9 for details on Gold Leafed Ball, Aluminum Truck, Halyards, Aluminum Cleats, Bronze Flagsnaps.

Optional equipment, Flash Collars, Decorative Bases — Ref. pages 8 & 9

PAINTING. All steel parts shall receive a shop coat of red lead and oil. Unless otherwise specified, two coats of Marine White or Aluminum shall be added — one in the shop and one in the field. All unexposed areas shall receive a shop coat of black asphaltum paint on both inside and outside surfaces.

For foundation assembly specifications and bases, see pages 8 & 9



aabec pole division of
the morgan-francis co., inc.

steel sectional

description

Assembled by joining diminishing sections by welding process, water and airtight, of seamless pipe with tensile strength of 70,000 to 90,000 lbs. PSI. Flagpoles will withstand wind velocities up to 90 mi./hr. All joints are inconspicuous; no heavy swages of offsets. All joints made without bolts, pins, rivets, screw couplings or lead calking.

Field Joints: Having close telescoping fit at field joints, welding is necessary. After pushing sections together until they seat tightly, the erector makes 4 plug welds and fills in beveled edge by welding all around. See cut. Grind 4 plug welds and connecting weld smooth — see shop drawing.

Ship by truck in one piece up to 40', in many states, by railroad up to 60'

dimensions

exposed height, feet	setting depth, feet	total length, feet ¼" wall	diameter in inches			minimum of sections	pole & ground protector weight, bare
			butt	top	ball		
LIGHT PATTERN							
17	3	20	3½	2⅜	5	3	150
25	3½	28½	4	2⅝	5	4	256
33	4	37	4½	2⅝	6	4	365
41	4½	45½	5	2⅝	6	6	500
49½	4½	54	5⅝	2⅝	6	7	660
57½	5	62½	6⅝	2⅝	8	8	870
65½	6	71½	7⅝	2⅝	8	9	1130
73	6	79	7⅝	2⅝	8	9	1310
80	7	87	8⅝	2⅝	8	10	1630
90	8	98	9⅝	2⅝	10	11	2180
100	8	108	10¾	2⅝	10	12	2735

HEAVY PATTERN

20	3	23	4	2 7/8	5	3	214
25	3 1/2	28 1/2	4 1/2	2 7/8	5	4	307
30	3 1/2	33 1/2	5	2 7/8	6	5	405
35	3 1/2	38 1/2	5	2 7/8	6	5	480
40	4	44	5 1/4	2 7/8	6	6	617
45	4 1/2	49 1/2	5 1/4	2 7/8	6	6	687
50	5	55	6 3/8	2 7/8	7	7	914
60	6	66	7 3/8	2 7/8	8	8	1223
70	7	77	8 3/8	2 7/8	8	9	1606
75	7 1/2	82 1/2	9 3/8	2 7/8	10	10	1988
80	8	88	10 3/4	2 7/8	10	11	2459
90	9	99	11 3/4	2 7/8	10	12	3002
100	10	110	12 3/4	2 7/8	12	13	3643
125	12	137	14	3 1/2	14	13	5804

aluminum tilting

counter-balanced conical tapered

description

Aluminum flagpole machine tapered to form an uninterrupted exterior surface without visible joints or offsets. Furnished with complete tilting unit that can be operated by one man. Pole made from seamless aluminum tubing, 3/16" min. wall thickness, alloy No. 6063-T-6. Uniform conical taper of 1 inch every 5'6" throughout the tapered portion; machined to a satin brushed finish then heavily waxed.

Lightning Deflection Poles, federal or industrial requirements; War Memorials — Factories.

Shipping in one piece — without field joints — is preferred, unless the freight saving is substantial and offsets cost of field jointing, both in the shop and at the site.

Ship by truck in one piece up to 40' in many states, by railroad up to 60'

dimensions — ECONOMY TYPE (Aluminum Poles) Tilt

total exposed height, feet	diameter in inches			"A" base plate (square) inches thickness	"H" holes "on centers" inches	channel width inches	4 anchor bolts, diameter, length, inches,	tapered portion 3/4" wall	weights pole only	tilting unit and weights
	butt	top	ball							
25	4 1/2	2 7/8	6	18 x 1/2	14	5	3/4 x 16	9'	68	440
30	5	3 1/4	6	18 x 1/2	14	6	3/4 x 16	9'8"	86	560
35	5 1/2	3 1/2	6	18 x 1/2	14	6	3/4 x 16	11'	110	715
40	6	3 1/2	8	20 x 1/2	16	7	3/4 x 16	13'9"	140	875
45	7	3 1/2	8	22 x 1/2	18	8	7/8 x 18	19'3"	190	1160
50	8	3 1/2	10	24 x 1/2	20	9	7/8 x 18	24'9"	355	2040

dimensions — STANDARD

total exposed height, feet	diameter in inches			channel width in.	"A" base plate (square) inches	"H" hole centers	anchor bolts, diameter, length, inches	weight, pounds	
	butt	top	ball					bare pole	complete tilting arrangement
20	5	3 1/4	5	6	16 x 1/2	12	3/4 x 15	70	350
25	5 1/2	3 1/2	6	6	18 x 1/2	14	3/4 x 16	100	500
30	6	3 1/2	6	7	20 x 1/2	16	3/4 x 16	125	625
35	7	3 1/2	6	8	22 x 1/2	16	3/4 x 17	170	850
40	8	3 1/2	8	9	24 x 1/2	20	7/8 x 17	225	1050
50	10	4	10	12	28 x 1/2	24	7/8 x 18	350	2100

- steel sectional
- tilting

- ground set

specifications

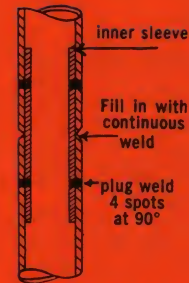
Furnish and erect, where shown on drawings or in specifications, a steel sectional flagpole, with all necessary fittings listed below, as manufactured by The Morgan-Francis Co., Inc., Route #1 at Expressway, Stratford, Conn. Flagpole to be ground set, feet exposed height, feet total length, the butt diameter inches and the top diameter inches.

STANDARD FITTINGS: Copy specification, pages 8 & 9, for gold leaf ball, halyards,

cleats, snaphooks, aluminum truck. For foundation assembly and bases, see pages 8 & 9

PAINTING: All steel parts shall receive in the shop a prime coat of red lead and oil, and finish and final coats of color specified by the architect. Foundation tube and all unexposed areas of pole shall receive a heavy shop coat of black asphaltum both inside and outside.

NOTE: Economy type weld-in-field joint for tapered or sectional poles. Drawing at right shows how the conventional field joint is easily assembled per instructions on shop drawings. This type, at lower cost, is recommended when transportation or budget is a problem. For field joints details if required and full assembly instructions, see Approved Shop Drawing furnished with each flagpole order.



aligned & welded in field
Type b



specifications

Furnish and erect, where shown on drawings or in specifications, a tilting, counter-balanced, tapered flagpole of seamless aluminum 6063-T-6 alloy x 3/16" wall with all standard fittings—aluminum ball, aluminum cleats, bronze flag snaps, halyards, aluminum truck (see Fittings, pages 8 & 9) as manufactured by the Morgan-Francis Co., Inc., Route #1 at Expressway, Stratford, Conn. Flagpole to be feet exposed. The tapered portion shall be feet inches, the butt diameter inches, and the top diameter inches.

COUNTER-BALANCED ARRANGEMENT: Provide one complete standard tilting unit consisting of two upright channel irons, welded to base plate, with steel container

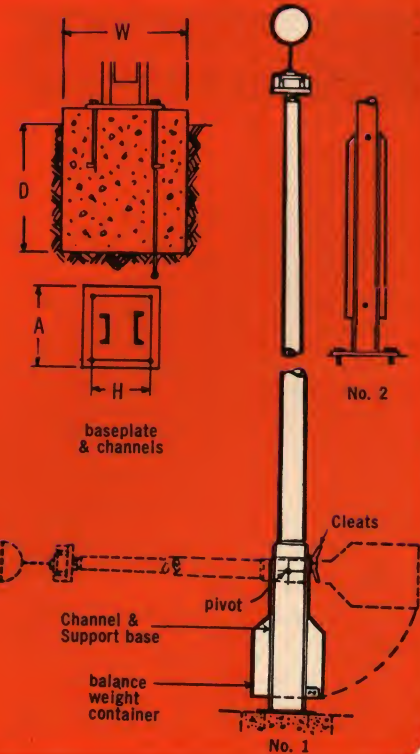
to hold counter-weights securely, locking clips, anchor bolts (see Table at left for standard dimensions and specifications) and lightning grounding rod 3/4" steel rod to be welded to one of the anchor bolts and extending downward to a minimum of one foot below concrete base. Tilting unit is so balanced that flagpole can be raised and lowered easily by one man after releasing locking clips. Type No. 1, No. 2 available.

FINISHING ON TILTING UNIT: Entire unit to receive in shop a primer coat of red lead and oil and first coat of final color as specified. (Usually two coats of aluminum or marine white.)

See detail illustrated at right.

"D"—Excavation depth: min. of 3'-0" or 10% of pole height on firm soil.

"W"—Square shape, min. of 10" wider than base plate.



aabec pole division of
the morgan-francis co., inc.

outrigger

description

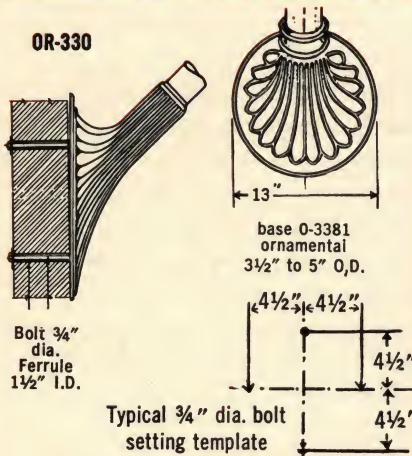
Tapered Aluminum, Steel, Bronze and Stainless Steel. Aluminum Alloy #6063-T6 x .188 wall with satin-brushed finish is recommended. Having less weight and maintenance requirement.

Standard Fittings: Acorn with Swivel Block or Truck to operate Halyards, fittings as selected from pages 8 and 9. Bases are of full strength castings in the metal selected. Bases project poles at a fixed angle of 45 degrees unless otherwise noted.

Bases are fitted with Anchor Bolts concealed by being installed thru wall from inside. When if wall construction prohibits this standard method—an additional plate $\frac{1}{2}$ " thick x 2" to 3" larger in all directions is added to the base (using same type metal). The Anchor Bolts are installed from face of Plate and to wall either using the Expansion Bolt method or to steel members in wall or thru wall to steel backing Plates.

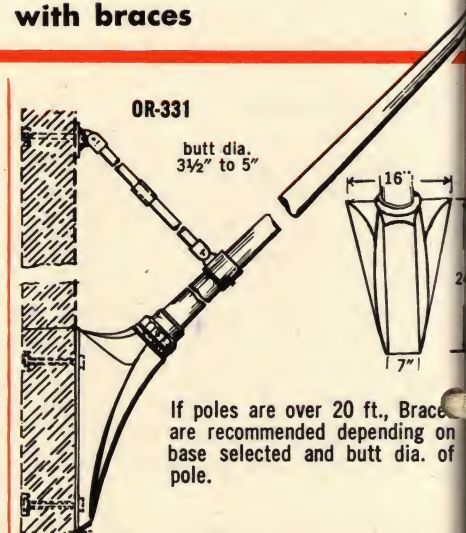
without braces

OR-330



with braces

OR-331



If poles are over 20 ft., Braces are recommended depending on base selected and butt dia. of pole.

selection of finials



Truck, ball assembly



Aluminum ball with swivel block



Acorn and pulley block

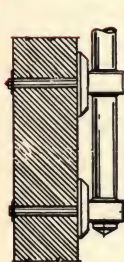
vertical

description

This line of Continuous Tapered wall mounted Aluminum flagpole is offered in standard lengths from 15 to 40 feet. The poles are of Cone Tapered construction, made of seamless aluminum, cold rolled with a uniform conical taper of 1" in every 5'6". The wall thickness is .188-in. throughout. Machined to a satin brush finish, then waxed, heavily paper wrapped and crated for shipment in one piece without field joints. No painting of the poles is required.

Supporting Brackets as shown in illustration are made of Heli-arc welded 6063-T6 aluminum for uniformity and strength. Electric welded steel brackets costing less are hot dipped galvanized after fabrication and painted if desired.

The standard Ferrule and Anchor Bolt requirement provides for installation security. Anchor Bolts are installed from face of Plate and to wall either using the Expansion Bolt method or to steel members in wall or thru wall to steel backing Plates.



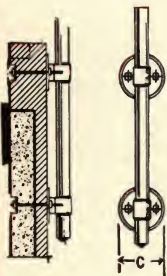
v-310
"C" bracket dimension

Pole Butt dia.	"C" Butt dia.
3" to 4 1/2"	10"
5" to 6"	12"
6 5/8" to 8"	14"



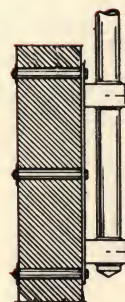
v-319
"C" dim. bracket dim.

Pole Butt dia.	Wall Plate Square
3" to 4"	10" x 3/8"
4 1/2" to 6"	12" x 1/2"
6 5/8" to 8"	14" x 1/2"

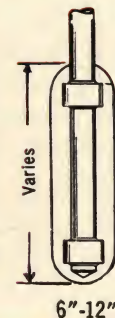


v-320
bracket dimensions

Pole Butt dia.	Wall Plate dia.
3" to 4"	10" x 3/8"
4 1/2" to 6"	12" x 1/2"
6 5/8" to 8"	14" x 1/2"



V-315



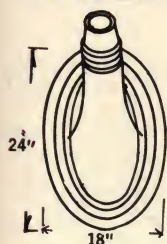
Varies
6"-12"

• wall mounted

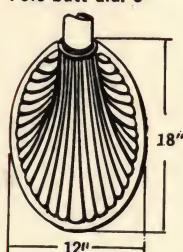
• outrigger
• vertical

bases

Base No. OR-334
Pole butt dia. 5"



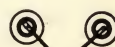
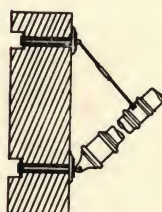
Base No. OR-439
Pole butt dia. 5"



dimensions

aluminum tapered	without braces		with braces	
Total length, ft.	8, 10, 12	15	20	25
Butt dia's. in.	3 1/2	4	4 1/2	5
Top dia's. in.	2 3/8	2 3/8	2 7/8	3 1/4
Tapered Portion ft.	6	9	9	9 8"
Ball dia. if used, in.	5	5	6	6

Economy Design, for a lower cost installation or where wall structure prohibits use of the ornamental bases, the three (3) point suspension type using the standard Steel Anchor Bolts and Ferrules installed in wall.



OR-333

specifications:

Furnish and erect cone tapered aluminum Outrigger Flagpole. Total lengthft. in., O.D. at Butt in., O.D. at top in. with No. Mounting and Decorative No. Base (state metal). Halyards, Swivel Flag-Snaps, Anchor bolts, nuts and washers. Finial as selected ... Acorn and Swivel Block or Ball and Swivel Block, Ball and Truck. Bases: Made in Aluminum, Bronze, Cast Iron. Finished: Satin-brushed or painted to match pole or wall. All as made by Aabec Pole Division of The Morgan-Francis Co., Inc., Stratford, Conn.

Outrigger Flagpoles are made in all tapered construction only in standardized lengths, diameters, wall thickness as shown in table and illustrations on this page.

Bolt Spacing: A "Setting Template" will be supplied with ferrules to ensure proper alignment with base pre-drilled holes. Exact details on shop drawing

dimensions Tapered Aluminum.

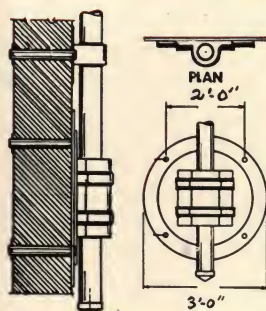
overall length in feet	outside diameter in inches			pole wall thickness	pole weight lbs.	tapered portion min.	cylindrical butt portion
	butt	top	ball				
15	4	2 3/8	4	.188	35	9'0"	6'0"
20	4 1/2	2 7/8	5	.188	55	9'0"	11'0"
23	5	3 1/4	5	.188	80	9'8"	13'4"
28	5 1/2	3 1/2	6	.188	110	11'0"	17'0"
33 1/2	6	3 1/2	7	.188	140	13'9"	19'3"
38 1/2	7	3 1/2	7	.188	185	19'3"	19'3"
40	8	3 1/2	8	.188	235	24'9"	19'3"

specifications:

Furnish and erect cone tapered Aluminum Vertical Flagpole complete with all the fittings, as listed. Flagpole to be Standard Type ft. overall; length, in. butt diameter to in. top diameter. The pole shall be machine-made of 6063-T6 Seamless aluminum, with a wall thickness of .188-in. and shall have a conical taper of 1" in each 5'6" throughout the tapered portion. The pole shall have a smooth uninterrupted exterior surface, shipped in one piece without field joints. Exterior satin-brushed finish, waxed. Standard fittings as selected from pages 8 and 9. One set of standard wall brackets. Design No. V-310, V-316, V-319, V-320 with Galvanized Steel Anchor bolts, nuts and washers.

For Steel Tapers Specifications see pages 2 and 3. Exact details on shop drawing

V-316



Special size for poles 30 ft. and higher or heavy steel poles

When poles over 30 ft. are used, especially in steel, it is advisable to use 3 brackets if engineer so estimates, depending on wall type and structure.

Bolt Spacing: A "Setting Template" will be supplied with ferrules to ensure proper alignment with base pre-drilled holes. Distance between top and bottom brackets—min. 10% pole length.

flagpole ornaments



We maintain a special department for the manufacture and the distribution of items known as "extras" or "specials" in the Flagpole trade. All characters are made of heavy copper hand wrought and are full-bodied for good appearance. Covered with genuine 23 karat goldleaf or with the natural copper antique finish. A separate Brochure is available with prices for the asking.

flagpole fittings

REQUIRED STANDARD FOR ALL POLE INSTALLATIONS: Truck, ball, cleats, halyards, either $\frac{5}{16}$ " cotton braided or $\frac{3}{8}$ " manila rope, snap hooks.

We stock a complete assortment of fittings for replacement and repair.

ornamental bases

For ground set installations where handsome appearance is paramount, Morgan-Francis offers a full, varied line of flash collars and base covers. Carefully cast or shaped in aluminum, iron or bronze, these durable decorative bases include both classical and contemporary designs. Sizes are available to fit the butt diameters and over ground tubes of every standard Morgan-Francis flagpole.

Aluminum Satin-Brushed finish or painted, plated as required.



eagle and weathervane

Both or singly, made from heavy gauge copper sheet hand wrought. Eagle and balls covered with genuine 23 karat goldleaf. Vane and cardinal points in bronze. Wing-spread in inches is 12" to 48" in 6" multiples, dependent on the pole height.



gold ball

20 ounce copper with genuine 23 karat gold-leaf over three coats of waterproof paint and one coat of waterproof gold size. Mounted on $\frac{3}{4}$ " brass tube over $\frac{5}{8}$ " diameter stainless steel rod. Thread fitted into Truck.

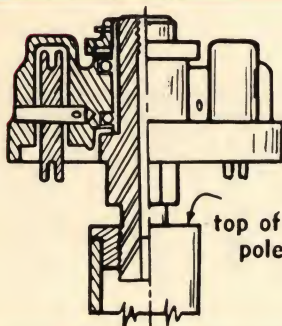
complete choice of finials

All characters full bodied of heavy copper, hand wrought. Horse, Rooster, Dog, Deer, Fish, Jockey on Horse, Horse Driver and Sulky, Bull, and many others in various sports. Please advise choice of antique or goldleaf finish. Quotations and literature on request.

aluminum ball



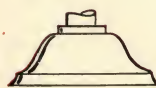
Spun from 14 gauge aluminum with watertight seams. With a satin-brushed and waxed finish. Mounted on $\frac{5}{8}$ " dia. dural rod threaded to fit truck.



truck assembly

Cast iron, aluminum, bronze or stainless steel. Two sizes — for poles with top diameters up to $3\frac{1}{2}$ ", and over 4". $\frac{1}{4}$ " and $5/16$ " diameter stainless steel ball bearings give free non-fouling revolving action rotating on upper and lower ball bearing machined in races. Two sheaves machined from cast aluminum, iron or bronze as selected rotate on $\frac{3}{8}$ " diameter stainless steel rod bearings. Truck thread fitted for supporting eagle, ball, weathervane, other finials.

MF No. 3001



22½"

Butt dia. 5" to 9"

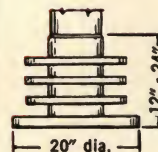
MF No. 3002



22½"

Butt dia. $5\frac{1}{16}$ " to $8\frac{3}{8}$ "

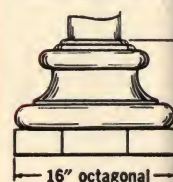
MF No. 3330



5½" to 12"

MF No. 3333

butt dia. 5" to 6½"



- foundations
- fittings • bases

foundations

construction Specifications for tube installation—All Ground-Set Poles

A Calking: For a moisture seal, waterproof type calking is applied approximately 2" deep around pole and between bases or collars.

B Flash Collar: Often used for appearance and added weather protection of pole base area.

C See pages 6 and 7 for selection of standard decorative bases (at extra cost).

D Top Diameter of Excavation: To be approximately 5 times pole butt diameter.

E Base Height: Above grade, usually 1" to 2" or as specified by architect.

F Pitch for Base: 1/2" to 1".

G Grout Cap: 1-2 mix. Added for a fine top finish. Marble, stone or special bases can be substituted as specified by architect.

H Wood Wedges: Temporary. 4 used around pole when centering.

J Concrete Mix: 1-2-4 Formula, complete in one pour.

K Sand: Screened and dry. Tamp in.

L Centering Wedges: 3/16" or 1/4" steel, tapered—for pole centering and to complete grounding connection. Welded to plate and inside of tube.

M Rest Plate: 3/8" to 1/2" steel plate welded to grounding spike. Set on firm soil to support

port tube when pouring concrete base. Size: (square) approx. 50% of Tube "Q".

N Bottom Diameter of Excavation: To be approximately 4 times pole butt diameter.

P Ground Protector: Next pipe size, standard on steel poles. At 12" above and 6" below grade there is a continuous weld at both places. For Aluminum poles, extra cost.

Q Tube: 16 gauge minimum galvanized corrugated steel. Minimum to be 10% of overall pole length. Length to be no less than 3 ft. and minimum of 10% of long poles overall length.

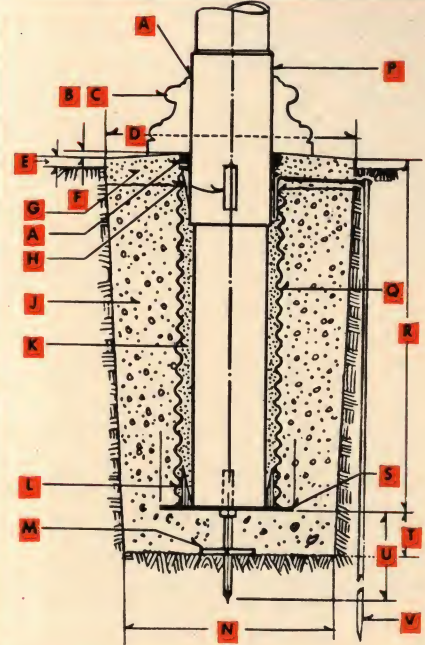
R Full Excavation Depth: One ft. plus Foundation Tube "Q".

S Tube Support Plate: 3/8" or 1/2" steel plate. Approx. 3"-4" larger (square) than Foundation Tube Dia.

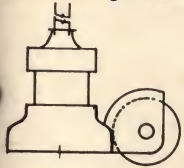
T Foundation Tube Footing: 1 ft. min. for best concrete in one pour.

U Grounding Spike: 3/4" diameter x 3'0" steel rod welded to center of tube support plate, and to rest plate at bottom of footing. min. of 3 ft. max of 5 ft.

V Special grounding when the standard is not applicable or deeper grounding required. At extra cost. 3/4" x 10' standard



economy truck type



(Revolving)
Single or double sheaved—fits all pole top diameters. Made in cast iron, aluminum or bronze. Equipped with stainless steel ball bearings.



cleats

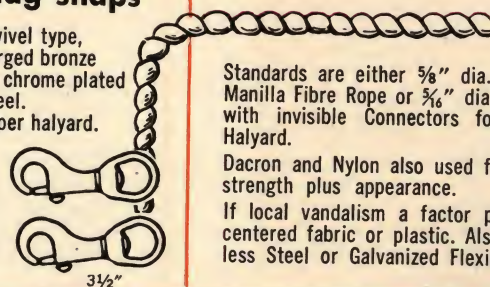
9" long. Each cast in aluminum, bronze or iron,

cleat covers

Cast aluminum with 2 hinges, hasp and staple of galvanized heavy steel and padlock.

flag snaps

Swivel type, forged bronze or chrome plated steel. 2 per halyard.

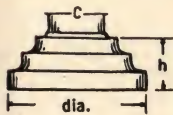


halyards

Standards are either 5/8" dia. U.S. Grade #1 Manilla Fibre Rope or 3/8" dia. Braided Cotton with invisible Connectors for a continuous Halyard.

Dacron and Nylon also used for long life and strength plus appearance.

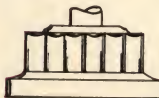
If local vandalism a factor possibly a metal centered fabric or plastic. Also suggest Stainless Steel or Galvanized Flexible Steel Cable.



MF No. 3346
dia. 14"—H—8"
c—4" to 6 1/2"

MF No. 3348
dia. 19"—H—7"
c—6" to 9"

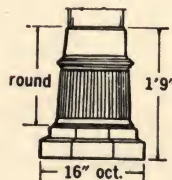
MF No. 3349



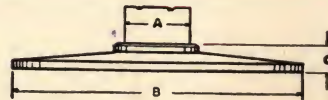
24" Diameter

9" Height
6" to 10"
Butt dia.

MF No. 3360

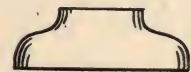


6" to 8 1/2"



	A	B	C
MF No. 3361	5" to 8 1/2"	22" dia.	3 1/2"
MF No. 3362	5" to 8 1/2"	30" dia.	3 1/2"
MF No. 3363	6" to 12 3/4"	38" dia.	3 1/2"
MF No. 3364	8" to 16"	46" dia.	3 1/2"

MF No. 335



Standard Flash Collar, in steel, & aluminum to fit all pole butt diameters and over foundation sleeve.

aabec pole division of
the morgan-francis co., inc.

line dryer poles

T Pole (TP)



Typical double Hook Installation or Multiple Posts with Continuous Cross Arms

description:

All Steel, Heavy Wall Tubular and Pipe Electric Arc Welded Construction, Hooks bolted or welded as selected, made sturdily for rugged outdoor use. Note selection of Hooks and different spacings. If necessary for area restrictions various other cross arm and upright lengths and hook spacings can be used. Consult our engineering department for layout details.

specifications:

Please order where called for on plans, T-Pole Line Dryer Pole TP No. or Multiple Posts with Continuous Cross Arms—MP No. or Twin Pole MP No. Indicate quantity single hook, double hook. All cross arm caps to press fit after hot dipped galvanized. All hooks $\frac{3}{8}$ " dia. As Manufactured by Aabec Pole Division of the Morgan-Francis Co., Inc.

standard — dimension table

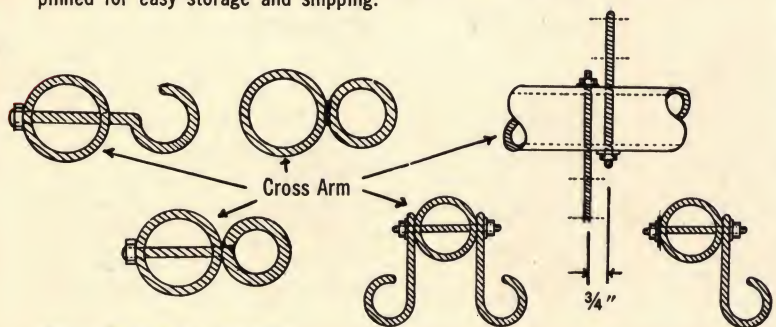
model no.	uprights			crossarm			hooks		setting in concrete depth
	length	o.d.	wall	length	o.d.	wall	quant.	spacing	
CT-765-1	7'6"	1.9"	.145"	38"	1.380"	.140"	4	12"	2'0"
CT-765-2	7'6"	1.9"	.145"	44"	1.380"	.140"	6	7"	2'0"
CT-765-3	7'6"	1.9"	.145"	54"	1.380"	.140"	3	18"	2'0"
CT-766-1	9'0"	2.375"	.154"	50"	1.90"	.145"	5	12"	2'6"
CT-766-2	9'0"	2.375"	.154"	56"	1.90"	.145"	7	9"	2'6"
CT-766-3	9'0"	2.375"	.154"	74"	1.90"	.145"	4	18"	2'6"
CT-767-1	9'0"	2.87"	.203"	50"	1.90"	.145"	5	12"	2'6"
CT-767-2	9'0"	2.87"	.203"	60"	1.90"	.145"	9	7"	2'6"
CT-767-3	9'0"	2.87"	.203"	74"	1.90"	.145"	4	18"	2'6"
CT-768-1	9'0"	3.500"	.216"	62"	2.375"	.154"	6	12"	2'6"
CT-768-2	9'0"	3.500"	.216"	74"	2.375"	.154"	8	8"	2'6"
CT-768-3	9'0"	3.500"	.216"	92"	2.375"	.154"	5	18"	2'6"
CT-769-1	9'6"	4.00"	.226"	62"	2.375"	.154"	6	12"	3'0"
CT-769-2	9'6"	4.00"	.226"	74"	2.375"	.154"	8	8"	3'0"
CT-769-3	9'6"	4.00"	.226"	92"	2.375"	.154"	5	18"	3'0"

twin pole and multiple posts with Continuous Cross Arms

	uprights 2 or more as required			crossarm—1 or more			hooks single or double spacing min.	setting in concrete depth
	length	o.d.	wall	suggested length ft.	o.d.	wall		
MP 665	8'2"	1.9"	1.40"	5-7	1.380"	.140"	18"	2'0'
MP 666	9'0"	2.375"	1.54"	6-8	1.9"	.145"	15"	2½'
MP 667	9'0"	2.875"	2.03"	7-9	2.375"	.154"	12"	2½'
MP 668	9'0"	3.500"	2.16"	8-10	2.375"	.154"	10"	2½'
MP 669	9'6"	4.00"	2.26"	9-12	2.875"	.203"	8"	2½'

Finish: Hot Dipped Galvanized after all fabrication.

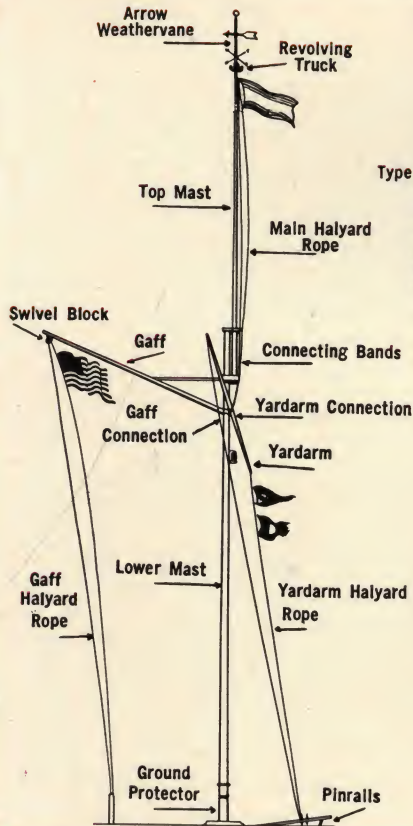
Note: 3, 4, 5, 6 or more uprights, with hook arms slip fitted and pinned for easy storage and shipping.



Finish: Galvanized, All hooks

- dryer and roof poles
- nautical

nautical flagpoles



dimensions, heavy type

	exposed height assembled	overall assembled length	top mast exposed tip dia. 3 1/4"	butt dia. 1/4" wall	lower mast exposed length	butt dia. 1/4" wall	top dia. 1/4" wall	yardarm tapered 3/4 to 1/4" wall length	tapered 3/4" wall length	Gaff butt dia.	Gaff top dia.	Shipping weight lbs.
Type N-1	40'	44'	14'	4 1/2"	26'	5 1/2"	4 1/2"	11'	3 1/2-2 1/2"	7'6"	2 7/8"	1011
N-2	45'	49 1/2'	16'	5"	29'	6"	5"	12'	4-2 7/8"	8'	2 7/8"	1215
N-3	50'	55'	18'	5 1/2"	32'	6 1/2"	5 1/2"	13'6"	4 1/2-2 7/8"	9'	3"	1509
N-4	55'	60 1/2'	19'9"	5 1/2"	35'3"	6 1/2"	5 1/2"	15'	4 1/2-2 7/8"	10'	3 1/2"	1620
N-5	60'	66'	21'6"	6"	38'6"	7 1/2"	6"	16'6"	5-3"	11'	4"	2042
N-6	65'	71 1/2'	23'6"	6"	41'6"	7 1/2"	6"	17'6"	5-3"	12'	4"	2240
N-7	70'	77'	25'	6"	45'	8 1/2"	6"	19'	5-3"	13'	4"	2560
N-8	75'	82 1/2'	27'	6 1/2"	48'	9 1/2"	6 1/2"	20'6"	5 1/2-3"	14'	4 1/2"	3160

Note: The economy design, welded sectionally, tapered steel, dimensioned approx. same 10% lighter weight and costs.

description:

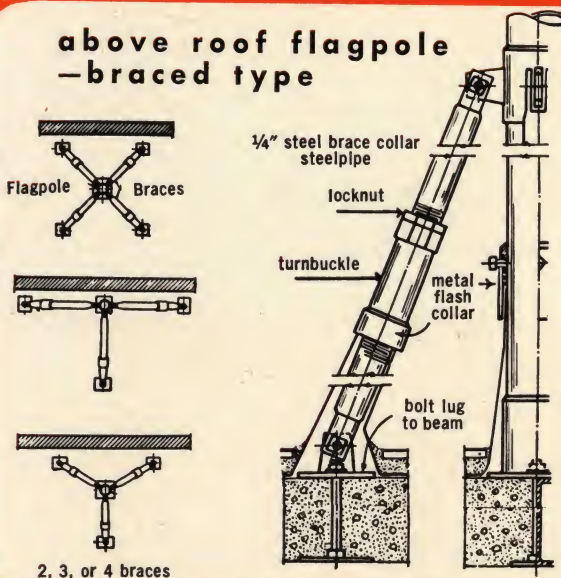
A Special Pole made particularly for display of more than two flags and special pennants, Insignias for Yacht Clubs, Marinas, Swimming Pools, Boating Clubs, Coast Guard, Naval and Marine Bases and private seashore or lakeside homes, buildings or clubs near water. For Standard Fittings: pages 8 and 9.

NOTE: If extra pennants and flags used, additional Halyards and Cleats are required. Weathervanes usually used—see pages 8 and 9. Finish: steel parts receive a prime coat of red lead and oil with two coats of Marine white paint. Hot dip galvanized finish suggested in salt water areas.

specifications:

Furnish where shown on plans, a Type No. feet high, (Welded Sectional) or (Cone Tapered) steel double-mast nautical type flagpole, complete with yardarm, gaff and all other equipment. Pole shall have an assembled exposed height above ground of feet. The yardarm shall be feet. The Gaff shall be feet. All as made by Aabec Pole Division of The Morgan-Francis Co., Inc.

above roof flagpole —braced type

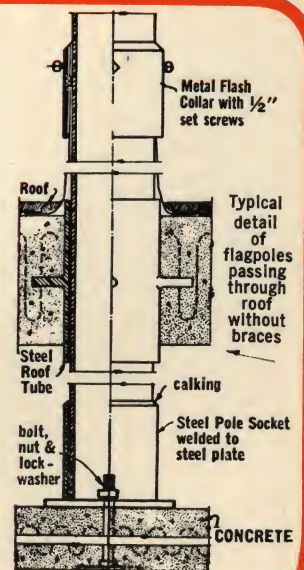


description:

Roof set Flagpoles are the same as ground set in all details except the setting arrangements. Roof set Installations are up to 50 ft. for steel and aluminum poles. Dim. table on pages 2, 3, 4 and 5. Tilting Poles as shown on page 5 may be set up for easy maintenance if so desired. See cut of typical Corner Braces for proper support on roof top. Poles may also be anchored through roof without braces. Any poles over 50 ft. should be supported through the roof to a floor or steel members of equal stability.

specifications:

Pole specifications are same as Ground Set on pages 2 and 3. Provide and erect where shown on plans. One Cone Tapered Aluminum or One Cone Tapered Steel Flagpole, overall length, 2, 3, or 4 Brace struts special supp. Butt dia. top dia. braces. (Indicate 2-3 or special.) Complete with fittings as selected from pages 8 and 9.



aabec pole division of
the morgan-francis co., inc.

maintenance

ALUMINUM FLAGPOLES have a heavily waxed, over satin brushed and polished finish that needs no maintenance.

STEEL POLES should be repainted when they become shabby or rust spots appear; before the selected color is applied, wire-brush any rusted areas and prime with red lead.

HALYARDS should be replaced before they break—when they show signs of wear. Carefully fabricated TRUCKS seldom require repair. If a replacement required for BALLS, EAGLES, other FINIALS, we stock all items for replacement.

erection

The installation of a Morgan-Francis flagpole will be completed most rapidly and efficiently by using truck or mobile unit with crane and boom, or a gin pole with rigging for hoisting heavy equipment. For best results, the job should be handled by erectors with flagpole or related experience and a reputation for careful work.

engineering service

If special design or construction required by our Engineering Department to meet certain required conditions. Upon receipt of rough sketches or detailed information regarding the contemplated construction, this department will be at your service to design the construction, foundation and equipment to lend beauty, durability and strength to your individual requirements. NOTE: It is our standard practice upon receipt of purchase order to issue the required amount of shop drawings detailing all items relative to the purchase for the approval of your architect or engineer.

estimating

If a problem of budgeting we will also submit our recommendations for the allowance named along with the data relative to building size, purpose and etc.

partial list of national installations:

FLAGPOLES: Ground Set	Pratt & Whitney Aircraft Hartford, Conn.
Elementary Schools Lakeland, Fla.	Hudgins Corp. Norfolk, Va.
St. John's Lutheran Church South Bend, Ind.	Adell Chemical Corp. Holyoke, Mass.
Todd Building Roseburg, Oregon	Bethlehem Plant Hanover, Pa.
Connecticut Expressway (see cover)	Line Dryer Poles Washington, D.C., Syracuse, N.Y., New Haven, Conn., New Britain, Conn., Baltimore, Md.
Nike Batteries, Installations U.S. Army Mass., R.I., N.Y., N.J., Conn., Pa.	Police Barracks Buffalo and Tarrytown, N.Y.
Loveman's Shopping Center Oak Ridge, Tenn.	Sheraton-Binghamton Hotel (3) Binghamton, N.Y.
West Leyden High School North Lake, Ill.	New England States Exposition Grounds Springfield, Mass.

antenna poles

SELF SUPPORTING, Steel (NO GUY WIRES), Ground Set or Roof Set. Wind loading up to 150 MPH.

Description: A permanent Self Supporting Tubular (Fabricated from plate by special process). Erection without Guy Wires allows for easy erection in confined areas where use of guy wires would be either impossible or price would be prohibitive.

TYPE "A": Manufactured in "SLIP-FIT" self aligning tapered tubular sections telescopically fitted, shop fitted to eliminate field welding. Exact details on shop drawing

TYPE "B": The Economy type made of seamless steel pipe and tubular sections telescopically with self aligning field joints, welded at site per supplied shop drawings.

Wiring: Outside is recommended but inside wiring can be successfully arranged. Special or standard fittings supplied with quotations.

Heights: Made in 25 ft. to 200 ft. Butt diameters from 4" to 18" Anchorage. The most practical method is by Steel Anchor Bolts of proper diameter and length embedded into standard concrete bases designed for each height and weight. When erection facilities and area permits the "Direct-Burial" Economy type base installation is used.

Correct base depth and Anchor Bolt dimensional data sent (when exact soil condition known) so proper support is ensured.

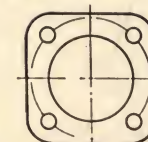
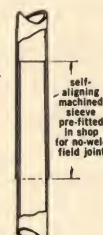
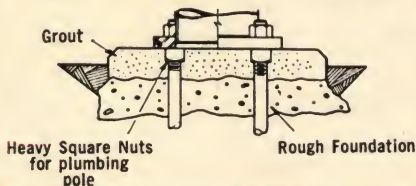
Accessibility: Steps 5/8" diameter either welded on pole or threaded into special lugs welded on pole, for safe access to any antenna. Often on request special working platforms installed on pole for group antenna maintenance. Retractable Arms to 6 ft. are also installed to allow for maintenance on Multiple Antennas.

Beacon Lights: As required by Airport Code.

Painting: Red lead primer inside and out on tapered poles. Final coats of colors as specified by purchaser (usually red and white). Shipping Sections: 25 ft. to 35 ft.

design information - tapered

height of pole	center of gravity	size of anchor bolt
25'	10'-9"	1" x 40"
50'	16'-6"	1 1/2" x 60"
75'	24'-6"	1 3/4" x 60"
100'	30'-0"	2 1/4" x 80"
120'	35'-9"	2 1/2" x 120"
147 1/2'	41'-0"	3" x 120"
175'	47'-0"	3" x 120"
190'	51'-3"	3" x 120"
200'	53'-0"	3" x 120"



retractable arms for accessibility
150' steel taper

Aabec Pole Division of

THE MORGAN-FRANCIS CO., Inc.

Route #1 at Expressway
(on Ferry Blvd.)
Stratford, Connecticut

Telephone
DRexel 8-2664
DRexel 8-2665

TOP-POLE ORNAMENTS AND FINIALS

For use in top decoration of Flagpoles, Sign Poles on Lawns, Dens, Club Rooms, etc., see description and cuts on pages 8 and 9.

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